

# The 50 MHz DX Bulletin

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The 50 MHz DX Bulletin was founded by Harry Schools K3HS. It is dedicated to the understanding and utilization of long distance propagation in the 6-meter Amateur band. The current editor and publisher is Victor Frank, K6FV. Subscription rates are \$24 U.S. first class mail, \$27 Canada/Mexico airmail, and \$30 by airmail elsewhere for 12 issues. Payments may be made to k6fv through PayPal. Circulation matters and DX reports should be sent to Victor R. Frank, K6FV, 12450 Skyline Blvd., Woodside, CA 94062-4554 USA. My Internet address is victor.frank@sri.com. My web site is <http://www.qsl.net/k6fv>. The bulletin may be freely quoted, provided that credit is given.

## DX Operations

Most of the listings in this column came from OZ6OM's *50 MHz DX News*.

**Guam, K1HP/KH2:** Yoshi, JE2EHP, plans HF and 6m operation from April 18-21.

**South Korea, HL4GHT:** Kim is now on 2m EME after testing on 6m earlier this year. MMMonVHF Newsletter indicates "Seems the EME Virus did infect him totally now."

**Nepal, 9N7JO:** Stig, LA7JO, plans to be here on and off until June 30, and on 160-6m.

**Timor, 4W6:** Angel/EA1QF, Pere/EA3CUU, Jose/EA4DB, Eugene/EA4KA, Txema/EA5BWR, and Jose/CT1ERC will be active on HF and 6m (to which they will pay special attention) from Dili, Timor Leste for two weeks in June. Their callsign is not known yet.

**Glorioso, TO4/G:** An operation of "some weeks" starting sometime between May 5 and 9 has obtained permissions. The operators will be Pascal/F5PTM, Freddy/F5IRO, Spephane/F6KIN, David/F8CRS, Yves-Michel/F5PRU and maybe three others. They will try to have 3 to 4 stations, HF+6m on the air. Frequencies indicated were 50.096 Beacon/RX EU: CW 50.200, SSB 50.205, CW 50.101, SSB 50.123, WSJT-JT6M/JT44 50.245.

**Afghanistan, T61AA:** VK1UN, Ross, plans to get on 2m and 6m EME from grid MM57. He notes that the old YA prefix is no longer in use. Ross will be in Afghanistan for up to two years and is equipped with a Tokyo Hi-Power amplifier.

**Qatar, A7/G0MKT:** Bill, NM7H, plans 40-6m activity next month through mid-June.

**Tunisia, 3V:** Frank, DL8YHR, and Jose, EA7KW, plan to activate one of the most wanted squares on 50, 144, and 432 MHz the last week of June.

**Jan Mayen, JX9JKA:** LA9JKA, Svein, will be "very active" on SSB and digital modes on 160-6m from EU-022 between March 27 and October 8.

**Jan Mayen Is., JX/G7VJR:** Michael is scheduled to be QRV on 30-6m June 27-July 4. He will have a 100W radio, vertical antennas, and will be operating from a tent on generator power.

**Aland Is., OH0/:** Look for Hans/PA0VHA, Jack/PA3BAG, Steve/PA2A, Wim/PA2AM, Wil/PA3ALK, and Teun/PB5A to be active on 160-6m from May 24 to June 6.

**Market Reef, OJ0:** Eric/SM1TDE will be leading a team whose callsign is yet to be announced during the first week of June. They plan 160-2m operation.

**Svalbard, JW/:** Rene Hasper writes; PE1L and PA0ZH will be QRV June 2 to 15. On 6m they will have 100W and a 4 el Yagi fixed on Europe.

**Wet Square, OH6ZZ:** is making a VHF expedition to JP91 on June 7. This one is 70 km from Finland. The equipment list suggests primarily 2m activity, but perhaps 6m too.

**Sable Is., CY0X:** plans June 25-July 7 6m (50.117) activity, and requests do NOT send your grid square as it consumes valuable time during an opening. During a good opening they might activate a portable station in rare grid GN03.

**Alaska, KL7DX:** An IOTA HF and 6m DXpedition to Chuginadak Is., grid AO52, is planned for July 21-27.

**Alaska, KL7/W6JKV:** plans 6m operation from a mountain top (in BP64) 30 mi NE of Fairbanks with an outstanding view in all directions between June 18 and 30.

**Bahamas, C6AYM:** Eric, K9GY, plans HF-6m activity from Nassau, New Providence Island from May 21-26.

**Grand Cayman, ZF2:** Jim/K4BI and Mario/K2ZD plan 6m activity from Northwest Point (EK99gi) from June 20-July 8. Equipment includes a kw amp and 6M5X Yagi @ 48'. Beacon (and likely CW-OP) frequency will be 50.095.

**Belize, V3:** Dennis Motschenbacher, K7BV, plans a June/July DXpedition to two islands in the Caribbean. His first stop will be Caye Caulker Is., grid EKN57xr, from June 20 to 26.

**Turks & Caicos Is., VP5:** Bob, K0OK plans HF-6m activity from Providenciales Is. May 21-28. In the CQ WPX CW contest May 24-25 he will be using the call VP5E. On 6m he will be running 100W into a Pro III to a 6M7JHV at 30'.

**Aruba, P40ZB:** Garry Fisher, K9WZB, and his wife Sharon, K7WZB, plan 40-6m operation here May 6-15. On 6m they plan to monitor 50.125 continuously while working lower bands, and work both 50.100 and 50.125.

**Barbados, 8P9TS:** Darren, G0TSM will be on holiday in Barbados from May 21 to June 1. Although operating time will be limited, he will concentrate on 6m CW with an IC7000 with 100W and 5 el Yagi.

**French Guyana, FY:** TO3EME will be QRV from French Guyana May 1-7. F1BCS and F1HDI will be on Ile Royale in Les Iles du Salut. On 6m they will have a 2-el Yagi and 100W and on 2m they will have an array of four short Yagis.



# 50 MHz DX Toplist

Credits to DF6NA, <http://www.vhf-dx.net/top.html>

Sorted by grids worked, then DXCC countries.

QRB is greatest distance worked in km by Sporadic E.

Callsign	QTH	Grids	DXCC	WAS	QRBEs	Date
K1TOL	FN44VG	1320	173	50	8658	907
ON4GG	JO20AR	1185	231	48	9335	1007
DL7QY	JN59BD	1130	217	39	13267	607
EH8BPX	IL18SK	1046	189	45	8246	307
PA4PA	JO22QE	981	198	37	0	706
DL9USA	JO71EN	975	202	0	0	707
9A8A	JN86EH	967	203	36	8968	607
SP6GWB	JO80HK	906	182	29	8583	208
LZ2CC	KN23JG	905	247	32	9356	607
IZ5EME	JN52NS	902	191	30	8292	807
OZ3K	JO45TL	901	200	0	0	906
DL8PM	JO30BU	901	192	19	4917	207
OZ3ZW	JO54RS	886	176	16	3967	807
OK1DO	JO60JD	881	182	37	6100	706
DL6AMI	JO50QX	870	185	32	8136	707
ON4PS	JO20KQ	866	171	0	9352	607
SP4MPB	KO03HT	861	190	0	8290	707
K4QI	FM06JA	852	122	50	0	607
F8DBF	IN78RI	844	159	37	7903	807
OH7PI	KP32XG	785	148	36	11938	1107
S51DI	JN76VL	782	172	0	0	208
GD0TEP	IO74SD	781	161	0	4139	707
SP2MKO	JO93CB	775	151	0	0	807
DL1EJA	JO31DS	770	169	34	9303	107
OK1FD	JO60CF	764	180	0	7450	807
DL2NO	JO43KM	764	163	33	0	907
OZ1IEP	JO55XU	762	147	0	5832	208
EH9IB	IM85NG	758	173	28	0	906
DL7ARM	JO62RJ	737	155	0	13892	807
YT1VV	JN94US	736	167	0	5494	308
IW5DHN	JN53GI	726	181	0	9326	707
G4RGK	IO91ON	723	184	32	0	807
IW1AZJ	JN35UB	720	180	23	9835	307
OZ1BNN	JO55PM	718	143	12	0	1207
F5DE	JN05DP	717	163	36	3638	1106
DG5YIL	JO32KB	695	155	32	3255	707
IV3SIX	JN65RU	685	188	0	0	507
DL7FF	JO62TJ	681	134	16	2980	807
LZ1AG	KN22ID	680	173	21	9795	107
SP6MLK	JO80	680	143	0	0	1107
OZ8ZS	JO55RT	671	134	0	8361	907
SP6NVN	JO81CJ	663	132	0	0	807
DL4ALI	JO50JW	657	136	19	0	307
DJ6XV	JO31LQ	629	127	17	7314	1007
PA3ECU	JO32CF	618	137	33	0	606
DL7ANR	JO62PM	616	120	0	0	1207
YU1HQR	JN94US	608	132	0	10698	108
CT1FJC	IM57OC	584	136	0	8109	108
NP3CW	FK68WL	582	107	50	13533	108
ES6RQ	KO28WA	566	114	0	8451	806
K1JT	FN20QI	561	90	50	5560	906
IK5YZW	JN53FU	540	166	21	0	806
S51ZO	JN86DR	540	134	0	8700	108
DJ4TC	JO63PN	538	118	0	0	707
LY2SA	KO14LL	523	116	8	4031	1007
YU7EF	KN04HV	522	133	8	0	108
K0KP	EN36VW	522	52	50	0	806
DG1VL	JO61WE	505	100	0	4697	807
HA8CE	KN06EN	502	93	2	0	807
OE5MPL	JN78CJ	496	98	0	3402	1107
OZ7IS	JO65DQ	486	128	0	0	1207
MW0HMY	IO71XT	476	89	4	7375	807
VA6SZ	DO33AP	474	25	50	5000	1206
DK3WG	JO72GI	472	88	5	8960	308
2W0CDJ	IO71XT	471	85	0	7375	806
DF6NA	JN49XS	470	85	20	11993	606
WP3UX	FK68UF	469	99	21	9932	408
EI7IX	IO53FT	465	119	25	8113	707
IK1PAG	JN35SB	454	89	0	8005	907
OZ2PBS	JO55XJ	435	75	0	0	108
F1BRV	JN16MX	426	90	17	2610	507

Callsign	QTH	Grids	DXCC	WAS	QRBEs	Date
PE2PE	JO21LU	425	95	0	7481	907
HB9SJE	JN47JO	423	95	0	0	606
HA3HV	JN86UK	414	79	0	9236	707
G8HGN	JO01FO	412	75	11	9842	807
DL3YEE	JO42GE	404	91	6	3365	707
OH4LA	KP20LG	362	69	5	4257	108
SP1MVG	JO73FJ	352	71	1	10684	1207
PA3EAQ	JO31CI	351	75	4	5113	1207
DL1SUZ	JO53UN	346	72	0	5921	307
DL4KG	JN48OU	346	66	8	3190	108
PE1BTX	JO22XW	340	70	0	0	906
OM7AQ	JN98UI	321	69	0	0	907
DK2BJ	JO30BS	320	60	2	5530	308
EB1EWE	IN53SC	319	63	15	6710	807
EB1EHO	IN73DM	319	61	0	6048	806
OK2PM	JN99AO	299	58	11	3749	1107
SK6HD	JO68SD	295	55	0	7814	806
EA1EBJ	IN73FL	294	69	7	6060	907
LZ4KK	KN23XU	294	64	0	9048	807
DH6DAO	JO41CN	283	52	0	3286	108
EH7BYM	IM66UM	281	60	3	0	807
EA7BYM	IM66UM	281	60	3	0	108
DL1SUN	JO53PN	279	48	0	0	108
OM3BC	JN98VG	276	56	0	8415	707
SM6WET	JO68SE	257	59	0	0	806
HB9WNM	JN47JL	256	53	0	3998	606
DG0DRF	JO71JJ	251	46	0	3630	807
PA3DZL	JO21HM	247	52	4	3241	1106
N5OMG	EL49VW	244	21	48	0	208
DG1AAE	JO52LD	243	39	0	27	707
SP7SZW	KO01AM	237	141	0	0	108
IW2NOR	JN45ON	232	56	5	7627	207
OK2GM	JN99GM	232	53	0	0	907
CU3EQ	HM68KP	203	82	24	0	1106
OE3SJA	JN88GH	203	56	0	8272	1006
9A4EW	JN95KG	201	55	0	2467	706
SM2ILF	KP04NP	196	37	0	4693	308
N3TEE	FM29DO	177	11	38	0	607
DK2YCT	JO32RG	174	45	0	0	1007
DJ8ES	JO43SX	173	45	0	3550	1206
DH4FAJ	JN49EX	156	50	0	5699	1007
N1RR	FN41HU	135	35	40	0	707
HA8MV	KN06GU	119	39	0	3878	507
LA6CF	JO49OG	115	29	0	3556	706
DB9UH	JN49WS	110	35	0	2042	706
F1CXX	JN18AT	103	0	2	5921	707
G8DKK	IO91VX	98	26	0	2126	807
DJ1OB	JN48OM	95	33	0	2096	208
HA8V	KN06HT	93	30	0	3971	606
HA4WQ	JN97IF	18	14	0	2295	806
PF7M	JO22PG	0	189	0	0	705
M0BCG	IO91DO	0	184	0	0	1006
IK0NOJ	JN61GV	0	172	0	0	705
G8BCG/P	IO70RK	0	170	0	0	705
ON4IMM	JO11UB	0	148	0	0	805
SV8CS	KN07JS	0	146	0	0	705
G4DEZ	JO03AE	0	131	30	0	705
DL2DR	JO31TO	0	126	0	0	1007
UX0FF	KN45KJ	0	123	0	0	104
KE4WBO	EL96VW	0	119	48	8000	104
DC9YC	JO31PJ	0	119	0	0	805
US5CCO	-	0	118	0	0	104
UU4JO	KN74	0	100	0	0	104
VE3CDP/W9	EM58AV	0	97	50	0	705
S54M	JN86CL	0	97	0	3426	805
VE2PEP	FN46IB	0	95	50	0	1204
W4VC	EM81TG	0	75	48	0	705
W3UR	FM19LG	0	68	49	0	705
ES5RY	KO38JI	0	62	0	0	805
F4BYF	IN97JL	0	56	0	0	905
PE1OID	JO33KI	0	56	0	0	705
G7CNF	IO81RE	0	54	0	6628	705
CT1ESJ	IN60KI	0	40	0	143	605
HA1FV	JN87JJ	0	35	0	2300	805
XE2HWB	DL44UC	0	0	50	0	1105
MW1MFY	IO81FL	0	0	0	0	1005
CX4CR	GF15wc	0	0	0	0	805
OZ8AFC	JO45WV	0	0	0	0	805



## March 2008 DX Reports

The following reports of 50 MHz DX propagation are courtesy of K6QXY and postings on the Internet including OH2AQ and the VK/ZL reflectors. G4UPS and JA1VOK reported no DX in February. Apologies to any sources I may have inadvertently neglected.

Listings obtained from the OH2AQ reflector may include distances in kilometers, determined preferentially from the grids in the post, and otherwise from one or both of the prefixes of the calls. Note that the latter results in VERY rough approximations to the distances, especially for large countries and call areas.

Listings from the vk logger already have six digit grids and distances in kilometers. These have usually been shortened to fit in the available space.

The first entry is *nmddhhi*, where *nm* is the month, *dd* is the day of the month, *hh* is the hour UTC, and *ii* is the minutes after the hour. The year is understood to be 2008. Symbols just before the call of the reporting station include: V=Video Carrier, I=Inband video sidebands, F=FM audio, B=beacon, C=CW, J=Digital, typically JT6M or JT65A for EME, R=RTTY or repeater, S=SSB, W=mode not mentioned (or both CW & SSB), H=heard only. BSc = backscatter, Sc = scatter, MS = meteor scatter, TR = tropo.

## Reports of Africa

**CANARY IS.**  
03171813 EA8AH CW 1464 50.110 CU3EQ

**MAURITANIA**  
03210523 5T5DC 599 WRD 3622 53.514 ISMTQ  
03261159 5T5DC CQ 3442 50.110 ON6NL

**MOROCCO**  
03281456 CN8MC 559 BSc 285 CT1FFU

**SAO TOME**  
03161407 S9SIX 222 50.080 B TR8CA

**ZAIRE**  
03041633 9Q1D 529 TEP 5194 50.021 CT1FFU

## Reports of Asia

**Chinese TV**  
03260506 CHINA 57 EN53 7416 49.750 T VK4BKP  
03290633 R1TV 41 OM34NI 8382 49.750 T VK4CZ  
03290811 BY/TV >DU7 50.001 I PA0HIP/  
03310944 BY/UTV >DU7 50.001 I PA0HIP/

**JAPAN**  
03110443 JE7YNO 519>QG48OV 6569 .027 B VK4BKP  
03151014 JH0MHE -24DB EME 8747 .204 OY3JE

03151153 JH2COZ -23DB EME 8747 .204 OY3JE  
03260552 JA2IGY 519 PM84JK 6310 .010 B VK4BKP  
03260610 JR2HCB 219 PM85CB 6390 .110 C VK4BKP  
03270645 JR6EXN 41 PM53GH 6362 .130 S VK4BKP  
03270713 JA1RJU 55 PM95 6381 .50.140 S VK4BKP  
03270714 JA2IGY 519 PM84JK 6310 .010 B VK4BKP  
03270714 JA2IGY 519 PM84JK 6310 .010 B VK4BKP  
03270732 JG6VBR 519 PM51RT 6176 .017 B VK4BKP  
03290548 JA2IGY 519 PM84JK 6310 .010 B VK4BKP  
03290610 JH3LBD 59 PM74 5858 50.150 S VK4SIX  
03290624 JG6VBR 519 PM51RT 6176 .017 B VK4BKP  
03290850 JR2XEX 599 DU7/PA0HIP .180 PA0HIP/  
03310820 JE7YNO 599 >DU7 9341 50.027 B PA0HIP/

**KOREA,S.**  
03290853 HL2KV 599 DU7>PA0HIP 50.110 PA0HIP/

**RUSSIAN FEDERATION**  
03090327 UA0-TV 58 PM53 7416 49.750 T VK4BKP.

## Reports of Europe

**ALAND IS.**  
03132122 OH0JFP 559 656 50.190 OZ1DJJ  
03132157 OH0JFP KP00AB>JP50JA 513 LA4LN

**AUSTRIA**  
03131935 OE5MPL JN78CU>JP50JA 1310 LA4LN  
03132000 OE5MPL PETE 794 50.234 SM0EPO  
03210728 OE5MPL JN78CU>JO01FN 1042 G3VYF  
03211111 OE5MPL JT6M MS 1361 50.225 J LA4ANA  
03230916 OE5MPL JN78CU>IO91AL 1203 G4PCI  
03230957 OE5MPL JT6M 1485 OZ1DJJ  
03232044 OE5MPL JT6M 1936KM 50.228 OH7HXH  
03310832 OE5MPL JT6M PETE 1262 .230 J G3VYF

**BELGIUM**  
03160812 ON5LGS JO10>JO01 213 50.155 G3VYF  
03160828 ON8DM 1779 50.144 PA2XHF  
03160834 ON4JER 1779 50.165 PA2XHF  
03160838 ON4IQ 1779 50.140 PA2XHF  
03160844 ON4WRC 1779 50.188 PA3EVY  
03160845 ON4IQ >JO55 2007 50.140 OZ1BNN  
03160859 ON6BR 1779 50.123 PA3EVY  
03160908 ON7XT 1779 50.169 PA3EVY  
03160917 ON7EG 1779 50.193 PA3EVY  
03160919 ON7KZ 1779 50.133 PA3EVY  
03160924 ON7EG IN/OUT>JN65 889 .193 S57RR  
03160928 ON7VHF 1779 50.135 PA3EVY  
03160935 ON4IQ J3E 1394 50.140 DD0UM  
03160941 ON4IQ GD SIG 1053 50.140 S57RR  
03161014 ON7QC 1578 50.180 OR7S  
03161015 ON1DNF 1578 50.148 OR7S  
03161015 ON4PJA 1578 50.197 OR7S  
03161022 ON4JER 1779 50.165 PA2DX  
03161032 ON5LGS 1109 50.155 F5UMP  
03161040 ON5LGS WEAK>JN65 889 50.155 S57RR  
03161058 ON4WRC 55 JO31LO>JO10 306 DJ6XV  
03252120 ON5LGS EDMOND 1922 50.190 G7KHF

**BELGIUM**  
03160804 OT7X JO10>JO01 213 50.147 G3VYF  
03160904 OR7A 1578 50.127 ON6ZK  
03160921 OT3C 1779 50.126 PA3EVY

03161008 OR0A HCC 1578 50.121 ON6ZK

## CRETE

03011026 SV9SIX 529 KM25>JO71 1948 B DH2UAK  
03011917 SV9SIX 529>KM07JS 420 .010 B SV8CS

## CROATIA

03251904 9A5CW MS JN65>JO55 1120 102 C OZ8ZS  
03281152 9A8A WEAK ES 1498 50.230 G3VYF

## DENMARK

03132019 OZ5AGQ JO65>KP24 1198 .233 J OH8A  
03132115 OZ1DJJ BO 50.234 J SM0EPO  
03151103 OZ1MEP JT6M 1086 50.230 M1BKF  
03151318 OZ1MEP CQ JT6M 1868 50.230 UT3UA  
03151853 OZ1BNN JT6M JORGEN 975 .230 OH8A  
03161116 OZ1DJJ -22DB EME 1347 .204 J OY3JE  
03200916 OZ1DJJ JT6M 903 50.230 OH7HXH  
03220754 OZ6ABA JT6M 908 50.225 OH7HXH  
03221050 OZ5BIQ 1218 50.230 HA2ED  
03251902 OZ8ZS MS 1364 50.102 C 9A5CW  
03252145 5Q6M JT6M MATT 1303 50.236 J EI2LP  
03271908 OZ1DJJ BO CQ-AU 260 50.100 DL5XJ  
03271939 OZ9CQ STRONG KIM 222 50.099 DL5XJ  
03272308 OZ1DJJ 53A JO65HP>JO48KM LA8NK  
03310939 OZ5AGJ JT6M 1086 50.230 G3VYF

## ENGLAND

03021521 GB3MBC 519 IO70OJ>IO73TI GW81ZR  
03061029 G3VYF JT6M MS MIKE 1562 230 J SP9HWY  
03081406 G1OAR IO82SQ>JO48KM 960 230 LA8NK  
03132126 G3VYF JT6M MIKE 1550 50.230 J SP3TQ  
03142326 G3VYF JT6M 1172 50.230 LA8NK  
03151020 G1OAR IO82SQ>JO48KM 960 230 LA8NK  
03162044 G1OAR IO82SQ>JO48KM 960 230 LA8NK  
03171148 G3VYF JT6M 1355 50.230 J HAZRD  
03201853 G3VYF JT6M 1355 50.230 OY3JE  
03220727 G3VYF MIKE 50.230 J SP9HWY  
03222223 G4IGO -23DB EME 1355 50.205 OY3JE  
03230857 G1OAR IO82SQ>JN78CJ 1266 OE5MPL  
03230919 G4PCI IO91AL>JN78CJ 1203 OE5MPL  
03231009 G4PCI 1242 50.234 J EA2BJM  
03232045 G4PBP JT6M 1491 50.230 OE9HGV  
03240907 G1OAR IO82SQ>JO90NH 1510 SP9HWY  
03241406 M5BXB VY WEAK 711 50.155 PE2HHN  
03281133 G3VYF FB SIG 1498 50.230 H 9A8A  
03281141 G3VYF FB BURTS 50.230 J HAZRD  
03291041 G0CHE IO90>IN73 853 50.230 EB2EHO  
03291942 G4DEZ JT6M 754 50.230 OZ1HUF  
03292001 G3VYF JT6M MIKE 1172 50.230 LA8NK  
03292055 G4DEF JO03AE>JO48KM 808 230 J LA8NK  
03300724 G3VYF JT6M MIKE 1562 50.230 SP9HWY  
03301251 G4DEF CQ JT6M 364 50.230 PA2V  
03310940 G3VYF JO01>JO47 842 50.230 OZ5AGJ

## ESTONIA

03191953 ES3RF 50.095 C OH7HXH  
03231354 ES3RF GENA 1350 50.227 J UT3UA  
03271806 ES1CW AU 50.110 W OH7HXH

## FAROE ISLANDS

03081744 OY3JE -25DB EME 6726 50.190 J W7GJ  
03091904 OY3JE -25DB JAN 50.190 W7GJ  
03141644 OY6BEC 52A 1347 50.035 OZ1DJJ



03160246	OY7JE	JT65A EME	50.204	J	K60XY	03301710	IK5ZUL	529TR	JN65>JN52	467	B	S57RR
03161109	OY3JE	JT65A EME	1347	50.204	OZ1DJJ	03301804	IZ4GWE	CQ DX	779	50.105	S57RR	
03201817	OY3JE	IP62>JO42	50.230	DK1XAM								
03201904	OY3JE	IP620A>JO01FN	1241		G3VYF							
03262117	OY6BEC	55A IP620A	1690	.035	B	OG2M						
03262124	OY6BEC	57A IP620A	1213	035	B	SM6CNN						
03262143	OY6BEC	55A 1347	50.035	B	OZ1DJJ							
03271751	OY6BEC	53A>IO75	793	50.035	MMOAMW							
03271855	OY6BEC	55A-57A	1347	50.035	OZ1DJJ							
03272118	OY6BEC	52A 971	50.035	LA8NK								
03272259	OY6BEC	57A 1347	50.035	OZ1DJJ								
03281617	OY6BEC	51A 1347	50.035	OZ1DJJ								
03011619	OH8A	JT6M MS 765	50.233	J	LA4ANA							
03011643	OH8A	KP24HP>JO90NH	1625	233	SP9HWY							
03012111	OH8A	JT6M MS 903	50.233	J	SP9HWY							
03012129	OH8MGK	KP23PQ>JO65HP	1138		OZ1DJJ							
03022034	OH8A	JT6M 933	50.230	J	LA8NK							
03022105	OH8MGK	KP23PQ>JO48KM	1047	J	LA8NK							
03031702	OH8A	& 2201 933	50.230	LA8NK								
03062105	OH8MGK	KP23PQ>JO48KM	1047	LA8NK								
03092234	OH3MF	57A 897	50.099	SM2DR								
03092236	OH9SIX	58A 1422	50.067	SM2DR								
03131944	OH8VJ	KP22UN>JO90NH	1418	J	SP9HWY							
03131947	OH8A	MS KP24>JO90	1614	.233	J	SP9HWY						
03132003	OH8A	JARI 991	50.233	J	OZ3ZW							
03132022	OH6NG	CQ NAC 897	50.095	SK2AT								
03132041	OH8A	897	50.233	J	SM2EPO							
03142230	OH8MGK	KP23PQ>JO48KM	1047	J	LA8NK							
03151439	OH7HXH	JT6M-MS KARI	897	233	J	SM7CMV						
03151519	OH7HXH	JT6M KARI	1190	.230	J	SP9HWY						
03151653	OH8HTG	JT6M CADDIS	933	.227	J	LA8NK						
03151731	OH7HXH	JT6M KARI	933	50.227	J	LA8NK						
03151738	OH8HTG	897	50.227	SM2EPO								
03151741	OH7HXH	KP53>JO59	1144	.230	LA4ANA							
03151913	OH7HXH	JT6M 975	50.235	J	OZ1BNN							
03152128	OH8MGK	KP23PQ>JO48KM	1047	J	LA8NK							
03160849	OH8HTG	933	50.230	LA8NK								
03160920	OH8HTG	KP34DI>JO90NH	1616	SP9HWY								
03161649	OH7HXH	JT6M-MS KARI	897	230	J	SM7CMV						
03161724	OH7HXH	JT6M 933	50.230	J	LA8NK							
03162010	OH8A	CQ 933	50.230	LA8NK								
03191954	OH7HXH	KO53HG>KO29IF	755	ES3RF								
03200916	OH7HXH	JT6M MS 903	50.230	OZ1DJJ								
03200942	OH7HXH	KP53>JO42	1765	.230	J	DK1XAM						
03201224	OH7HXH	KP53HG	JT6M 1383	230	OZ1BNN							
03201805	OH7HXH	JT6M 1694	50.230	J	OY3JE							
03220855	OH7HXH	KARI	50.230	SP9HWY								
03242210	OH3MB	JT6M MS 1190	50.230	J	SP9HWY							
03251939	OH7HXH	MS KP53>JO55	50.102	C	OZ8ZS							
03261820	OH5RAC	AURORA	50.033	B	OH7HXH							
03271246	OH9SIX	54A 1422	50.067	B	SM2DR							
03271521	OH9SIX	AURORA 659	50.067	B	OH7HXH							
03271805	OH1MLZ	AU	50.110	W	OH7HXH							
03272119	OH8A	KP24HP>JN78CJ	1910	230	OESMPL							
03272128	OH8A	CQ 933	50.230	LA8NK								
03281443	OH9SIX	AUR 659	50.067	B	OH7HXH							
03281815	OH9SIX	AURORA 659	50.067	B	OH7HXH							
03281827	OH7HXH	KP53>KP04	496	50.099	SM2A							
03282134	OH8MGK	KP23PQ>JO48KM	1047	LA8NK								
03290814	OH8HTG	JT6M 991	50.227	J	OZ3ZW							
03290815	OH7HXH	JT6M 991	50.225	J	OZ3ZW							
03300832	OH7HXH	JT6M 933	50.230	J	LA8NK							
03301708	OH8A	JT6M JARI	1190	50.230	SP9HWY							
03302004	OH8A	JT6M 933	50.230	J	LA8NK							
03011017	HG1BVB	29TR&MS JN87FI>JO50	50.230	B	DK2EA							
03011708	HG1BVB	579 JN87FI>JO01FN	1678	B	G3VYF							
03011709	HG1BVB	579 JN86VK>JO90IR	50.110	B	G7RAU							
03011709	HG1BVB	579 IO90 1452	50.007	B	G0CHE							
03011709	HG1BVB	589 KN06OQ>IO90IR	50.007	B	G7RAU							
03021920	HG1BVB	599 JN87FI>JN88FF	346	B	OZ1BNN							
03031051	HG1BVB	559 JN86VK>JN78CJ	346	OESMPL								
03031057	HG1BVB	519 JN87FI>JO50	530B	DK2EA								
03031443	HG1BVB	519 JN86VK>JO80IK	451B	SP6MLK								
03171141	HA2RD	CQ JT6M 1814	50.230	G3VYF								
03172113	HA2RD	CQ 1144	50.230	SM2EPO								
03191119	HG1BVB	329TR JN87FI>JO50	50.230	B	DK2EA							
03201435	HG1BVB	329TR JN87FI>JO50	50.230	B	DK2EA							
03201512	HG1BVB	519 JN86VK>JO80IK	530B	SP6MLK								
03241208	HG1BVB	329TR JN87FI>JO50	530B	DK2EA								
03241545	HG1BVB	519 JN86VK>JO80IK	451B	SP6MLK								
03261105	HG1BVB	329TR JN87FI>JO50	50.007	B	DK2EA							
03261318	HG1BVB	519 JN86VK 451	.007	B	SP6MLK							
03271424	HG1BVB	519 JO80IK 451	.007	B	SP6MLK							
03280837	HG1BVB	JN86EH	50.007	B	9A8A							
03290945	HG1BVB	559 JN86VK>JN78CJ	346B	OESMPL								
03291053	HG1BVB	519 JN86VK>JO80IK	451B	SP6MLK								
03310807	HG1BVB	559 JN86VK>JN78CJ	346B	OESMPL								
03071144	CT1ART	529>IL28FC	1313	.037	B	EA8AVI						
03072239	CT1RLA	579>IL28FC	1313	.076	B	EA8AVI						
03131013	CT1ART	41>IM76HE	205	.037	B	ZB3B						
03142210	CT1ART	589>IL28	1246	50.036	B	EA8AVI						
03161253	CT1ART	529>IL28	1246	50.036	B	EA8AVI						
03161836	CT1ART	53 IM76HE	50.037	B	ZB3B							
03162253	CT1ART	579>IL28	1246	50.036	B	EA8AVI						
03162255	CT1RLA	529>IL28	1246	50.076	B	EA8AVI						
03181942	CT1ART	549 1762	50.036	B	CU3EQ							
03211545	CT1FFU	CQ 2251	50.111	DK1MAX								
03241042	CT1ART	41 IM76HE	50.037	B	ZB3B							
03262044	CT1ART	AUDIBLE	50.037	B	ZB3B							
03282229	CT1ART	559>IL28FC	1313	.036	B	EA8AVI						
03071144	CT1ART	529>IL28FC	1313	.037	B	EA8AVI						
03072239	CT1RLA	579>IL28FC	1313	.076	B	EA8AVI						
03131013	CT1ART	41>IM76HE	205	.037	B	ZB3B						
03142210	CT1ART	589>IL28	1246	50.036	B	EA8AVI						
03161253	CT1ART	529>IL28	1246	50.036	B	EA8AVI						
03161836	CT1ART	53 IM76HE	50.037	B	ZB3B							
03162253	CT1ART	579>IL28	1246	50.036	B	EA8AVI						
03162255	CT1RLA	529>IL28	1246	50.076	B	EA8AVI						
03181942	CT1ART	549 1762	50.036	B	CU3EQ							
03211545	CT1FFU	CQ 2251	50.111	DK1MAX								
03241042	CT1ART	41 IM76HE	50.037	B	ZB3B							
03262044	CT1ART	AUDIBLE	50.037	B	ZB3B							
03282229	CT1ART	559>IL28FC	1313	.036	B	EA8AVI						
03071144	CT1ART	529>IL28FC	1313	.037	B	EA8AVI						
03072239	CT1RLA	579>IL28FC	1313	.076	B	EA8AVI						
03131013	CT1ART	41>IM76HE	205	.037	B	ZB3B						
03142210	CT1ART	589>IL28	1246	50.036	B	EA8AVI						
03161253	CT1ART	529>IL28	1246	50.036	B	EA8AVI						
03161836	CT1ART	53 IM76HE	50.037	B	ZB3B							
03162253	CT1ART	579>IL28	1246	50.036	B	EA8AVI						
03162255	CT1RLA	529>IL28	1246	50.076	B	EA8AVI						
03181942	CT1ART	549 1762	50.036	B	CU3EQ							
03211545	CT1FFU	CQ 2251	50.111	DK1MAX								
03241042	CT1ART	41 IM76HE	50.037	B	ZB3B							
03262044	CT1ART	AUDIBLE	50.037	B	ZB3B							
03282229	CT1ART	559>IL28FC	1313	.036	B	EA8AVI						
03071144	CT1ART	529>IL28FC	1313	.037	B	EA8AVI						
03072239	CT1RLA	579>IL28FC	1313	.076	B	EA8AVI						
03131013	CT1ART	41>IM76HE	205	.037	B	ZB3B						
03142210	CT1ART	589>IL28	1246	50.036	B	EA8AVI						
03161253	CT1ART	529>IL28	1246	50.036	B	EA8AVI						
03161836	CT1ART	53 IM76HE	50.037	B	ZB3B							
03162253	CT1ART	579>IL28	1246	50.036	B	EA8AVI						
03162255	CT1RLA	529>IL28	1246	50.076	B	EA8AVI						
03181942	CT1ART	549 1762	50.036	B	CU3EQ							



**ROMANIA**

03291152 YOSPCX PINGS 1554 50.145  
03291000 YO3BL CQ CW 200 50.110

**SARDINIA**

03291011 ISOGQX JT6M BRUNO 1567 .230 J G3VYF  
03291051 ISOGQX JM49OH>IN73DM 1326 EB1EHO  
03291111 ISOGQX JT6M MS BRUNO 1567 J GOCHE  
03291152 ISOGQX JM49>IM99 50.230 EA5EF  
03301039 ISOSWV JO32KF 50.150 PE2HHN

**SCOTLAND**

03071656 MM0AMW -26 EME 50.190 J W7GJ  
03081825 GM4WJA -21DB EME 50.190 J W7GJ  
03151958 GM4WJA IO75OH>JO48KM 891 LA8NK  
03230848 MM5AJW IO78KI>JN78CJ 1587 OE5MPL

**SERBIA**

03231350 YU1ACR PINGS 574 50.100 H SP6MLK  
03241535 YU1ACR TR/MS 574 50.100 SP6MLK

**SLOVENIA**

03011727 S57RR CQ NORTH 779 50.150 IV3VEM  
03011736 S57RR JN75>JO50 630 DK2EA  
03081444 S57RR S49TR>JO50UF 626 .100 DK2EA  
03160924 S59MA JN76FD>JO01FN 1185 G3VYF  
03160940 S57RR 1053 50.140 W ON4IQ  
03160944 S59MA JT6M MS 1061 50.220 OZ1DUJ  
03211445 S57RR 50.190 J IW7EBA  
03272015 S57RR JN65 328 50.100 9A5CUH  
03280849 S55ZRS 539 JN76MC 626 .022 B IV3UHL  
03301724 S57RR 549 TR 297 50.100 H OE5MPL

**SPAIN**

03161646 EA7DUD IN73>IM76 754 50.230 EB1BMO  
03191628 EA2BCJ IN91>JO42 1435 .230 J DK1XAM  
03220839 EA3GKU JN01NJ>JN78CJ 1288 OE5MPL  
03220926 EA7DUD IM76SR>JM49OH 1229 ISOGQX  
03300931 EA7HG IM99>IM87 282 50.150 EA5EF  
03301159 EA5EF 1122 50.230 G3VYF

**SVALBARD**

03021954 JW5SIX 1778 50.046 B OH6CT  
03022104 JW5SIX 579 2385 50.046 B SM2DR  
03022123 JW5SIX 589 1778 50.047 B OH8A  
03141755 JW7SIX 59 1778 50.048 B OH7HXH  
03261818 JW5SIX 559 1778 50.046 B OH7HXH  
03261818 JW7SIX 529 1778 50.048 B OH7HXH  
03261820 JW5SIX 599 1778 50.049 B OH7HXH  
03271726 JW7SIX STRONG 1778 50.048 B OH7HXH  
03271729 JW9SIX 1778 50.049 B OH7HXH  
03281726 JW7SIX 579 JO68>KP04 1562 B SM2A  
03281730 JW7SIX 559 1778 50.048 B OH7HXH  
03281738 JW5SIX 559 1778 50.046 B OH7HXH  
03281747 JW9SIX 559 JO94LM>KP04NP B SM2A  
03281828 JW7SIX STRONG ES 1778 .047 B OH7HXH  
03282038 JW5SIX GOOD SIGNAL 1778 046 B OH7HXH

**SWEDEN**

03091503 SM0EPO CQ 418 50.230 LA8NK  
03092013 SM4ANQ JT6M JP70>JO90 1161 J SP9HWY  
03131407 SM7CMV JO75AM>JN19WT 948 F6EBH  
03132052 SM0EPO JO89>JO90 1030 .222 J SP9HWY  
03151003 SM0EPO CQ JT6M 1744 50.230 UT3UA

03151643 SM0EPO JO42FT 423 50.230 DK1XAM  
03220757 SM3BIU JP73>JN78 1679 .230 OE5MPL  
03281056 SM7CMV FINE BURSTS 50.230 J HA2RD  
03281825 SM2A AU 897 50.100 W OH7HXH  
03290749 SM3BIU JT6M MS 707 50.230 J SP9HWY

**SWITZERLAND**

03021424 HB9MFD JT6M-MS 1084 50.230 J SM7CMV  
03031058 HB9SIX 419 JN47CF 466 .058 B OE5MPL  
03031200 HB9SIX 322TR JN47QF>JO50 382 DK2EA  
03061036 HB9MFD JT6M MS PAUL 988 230 J SP9HWY  
03071027 HB9MFD JN47GO>JO90NH 828 J SP9HWY  
03081129 HB9SIX 322TR JN47QF>JO50 DK2EA  
03100811 HB9SIX 422TR JN46QF>JO50 489 DK2EA  
03161032 HB9MFD PAUL 988 50.230 J SP9HWY  
03214204 HB9SIX 322TR JN47QF>JO50 B DK2EA  
03241430 HB9SIX 219TR JN47QF>JO50 382B DK2EA  
03281256 HB9SIX 219TR JN47QF>JO50 B DK2EA  
03310803 HB9SIX JN47CF>JN78CJ 466 B OE5MPL

**UKRAINE**

03081113 UZ5DU &1213 1182 50.230 LA8NK  
03100823 UT3UA KO50>JO90 50.230 SP9HWY  
03132109 UZ5DU JN18MD>JP50JA 1537 LA49NA  
03151107 UT3UA JT6M 1279 50.230 SP9HWY  
03160658 UZ5DU JT6M 1139 50.230 OH7HXH  
03230935 UT3UA KO50GH>JN78CJ 1199 OE5MPL  
03232018 UZ5DU KN18MD>JO01FN 1655 G3VYF  
03282154 UT3UA JT6M 2S -4 DB 871 230 YO2NAA  
03300922 UT3UA JT6M MS SERGEY 1744 J SM7CMV

**WALES**

03290923 GW8IZR IO73TI>JO59 1161 230 LA49NA

**Reports of North America****North Atlantic Waters**

03010057 UT1FG/MM 55>GG65OT 50.110 PY2REK  
03010122 UT1FG/MM 57 50.110 S ZP6CW  
03010156 UT1FG/MM 57 50.110 LU6HTR  
03010206 UT1FG/MM 50.110 PY2YW  
03010235 UT1FG/MM 59 EK10 50.110 S W9DR/4  
03010328 UT1FG/MM FK11 50.110 W9DR/4  
03012307 UT1FG/MM 50.110 W  
03020044 UT1FG/MM FK22>GG46IP >0233 PY5HOT  
03020059 UT1FG/MM 59>GR05OI YURI 110 LU3EE  
03020135 UT1FG/MM CQ DX 50.110 PY5EW  
03030030 UT1FG/MM CQ DX SSB 50.110 PY5EW  
03050106 UT1FG/MM GL00 50.110 PY5HOT  
03141657 UT1FG/MM IM44>IL28 767 .110 EA8AVI

**ALASKA**

03090514 KL7NO >FN44 50.125 W K1TOL

**BAHAMAS**

03031721 C6APP S5 FL16HS>FM18LL 1302 B N3DB  
03242132 C6APP 338C ABACO 544 50.040 B KE4WBO  
03261624 C6APP 448C ABACO 544 50.040 B KE4WBO

**CANADA, Eastern**

03311225 VE1YX 44 FN74>FN03 1123 165 VE3CRU

**CANADA, Quebec**

03231302 VE2AT CQ 983 50.125 W28D  
03260949 VE2YAT 41A FN07>FO40 671 B VE2XK  
03261619 VE2YAT 41A FN07>FO40 671 B VE2XK  
03262208 VE2XK CW>EN64 1104 50.125 N8JX  
03262230 VE2XK AU 317 50.130 W N1BUG  
03270259 VE2XK 51A FN07>EN43 1033 KA9FOX  
03272107 VA2FNT FN45 AU 1121 50.125 N8JX  
03272132 VE2XK AU 983 50.095 N8JX  
03272218 VE2LCM 55A FN07>FN46 616 VE2XK  
03272238 VE2XK CQ AU 317 50.135 N1BUG  
03280149 VE2XK 52A FN07>EN44 983 125 K9MU

**CANADA, Ontario**

03011300 VE3CRU FN03>EM89 555 50.146 W28D  
03090520 VE3EN CQ A 1104 50.125 VA2WDQ  
03172307 VE3CRU 473 AB3BK  
03192128 VE3WCC 519 FN15>EM79 934 B W8IF  
03200029 VE3WCC 419 FN15>EM89 828 B W28D  
03201400 VE3WCC 319 FN07>FN15 269 B VE2XK  
03222318 VE3WCC FN15>EM89 828 50.009 B W28D  
03231245 VE3WCC 529 FN15>EM89 828 B W28D  
03231318 VE3/W4TAA BILL 552 50.126 W28D  
03232346 VE3/W4TAA FN15>FN03 273 125 VE3CRU  
03262221 VE3/W4TAA FN15>EN64 793 126 N8JX  
03272124 VA3NQ 55A FN07>FN13 471 100 VE2XK  
03272139 VE3EGC 52A FN07>EN76 468 VE2XK  
03272149 VE3EGC EN76 AU 686 50.099 N8JX  
03300009 VE3/W4TAA 529 W/W9DR/4 1126 W8IF  
03300137 VE3/W4TAA FN15 1703 50.125 W28D  
03311156 VE3/W4TAA SSB 1566 50.125 VA3DX  
03311227 VE3/W4TAA 57 FN15>FN03 273 VE3CRU

**CANADA, Northern**

03090621 VE8BY 599 2031 50.051 B N1BUG  
03270218 VE8BY 57A FP53>FN07 1881 B VE2XK  
03280213 VE8BY FP53>FN07 1881 50.050 B VE2XK

**CANADA, Manitoba**

03090457 VE4VHF AURES S9 50.036 B K1TOL  
03090503 VE4VHF 53A EN19>EM89 1566 B W28D  
03090552 VE4VHF EN19>EN51 1084 .036 B K9PPY  
03090553 VE4VHF 599 EN19>FN35 1848 B VA2WDQ  
03270029 VE4ARM EN09 AU 1601 50.019 B N8JX  
03270037 VE4VHF 41A EN19>FN07 1341 B VE2XK  
03270039 VE4ARM 41A EN09>FN07 1485 B VE2XK  
03270252 VE4ARM 52AUE EN09>FN07 1485 B VE2XK  
03270324 VE4VHF 55AUE EN19>FN07 1341 B VE2XK  
03280140 VE4ARM 53A EN18>EN44 638 B K9MU

**CANADA, Alberta**

03090220 VE6EMU 52A DO33>CN88 892 B KE7V  
03090316 VE6JW 52A DO33>CN88 892 125 KE7V  
03140637 VE6EMU 53A DO33 1334 50.041 B KE7V  
03260638 VE6EMU 51A DO33>CN88 892 B KE7V  
03270032 VE6EMU 51A DO33>CN88 892 B KE7V  
03270101 VE6JW 55A DO33>CN88 892 125 KE7V  
03270237 VE6DDD 55A DO22>CN88 718 KE7V  
03270241 VE6DDD 57 DO22>CN87 785 125 N7YT  
03270243 VA6AN 57A DO33>CN88 892 125 KE7V  
03270401 VE6EMU 54A DO33>DN17 50.041 B W7MEM  
03280148 VE6EMU 55A DO33 1334 50.041 B KE7V  
03280310 VE6NA 55A DO20 1012 50.125 KE7V



# CANADA, British Columbia

03090223 VE7FG 52A CO83>CN88 555 033 B KE7V  
03090713 VE7DUB 55/9 AU CO88>EN84 N8CJ  
03090732 VE7DUB 55/9 AU CO88>EN84 125 N8CJ  
03171832 VE7DAY 539 CO70>DN74 50.125 H K7TNT

# COSTA RICA

03020052 TI5XP 51 5725 50.110 S PY5HOT  
03020119 TI2NA 559 EJ89 2343 50.081 B KE4WBO  
03020129 TI5XP 559-599 2371 50.110 KE4WBO  
03020145 TI2ALF 59 EJ79 2371 50.110 KE4WBO  
03020236 TI5XP 41 5725 50.110 PY5HOT  
03092250 TI2ALF 59>GF050P 5603 .110 LW1DZ  
03092251 TI2ALF 5606 50.110 LGUHTR  
03092256 TI7/NSEBK 52>GF050P 5603 LW1DZ  
03092302 TI2NA 529>GG46IP 5174 .082 B PY5EW  
03170103 TI2NA 529>GG46IP 5174 .081 B PY5EW  
03170107 TI5XP 55 EK70>GG46 5287 110 PY5EW  
03170114 TI2NA WEAK>GG65 5592 .081 B PY2REK

# DOMINICAN REPUBLIC

03301810 HI8AA 53 434 50.110 WP4KJJ

# Honduras, Swan Is.

03191601 HQ8R 59 Es EK66 1671 50.107 KE4WBO

# MARTINIQUE

03030028 FM1FV 59 FK94>GG46 4362 110 PY5EW  
03030028 FM1FV FK94>GG65 4594 50.110 PY2REK

# MEXICO, XE1

03211718 XE1AO DK89DF>EL03KR 689 110 XE2YBG  
03211753 XE1AY 33 DK79>EL03 767 .110 XE2YBG  
03272110 XE1RP 7493 50.110 PP5AR

# MEXICO, XE2

03272127 XE2ARV 8410 50.110 PP5AR

# PANAMA

03020135 HP3XUG CQDX 2454 50.105 KE4WBO

# PUERTO RICO

03020154 WP4AZT 57 5952 50.115 LU6HTR  
03092213 WP4AZT 5952 50.110 LU6HTR  
03301815 KP4 44>FL Es 1942 50.110 KE4WBO  
03301816 WP4AA QSB 1942 50.110 KE4WBO

# ST BARTHELEMY

03010154 FJ5DX 59>GG65OT 4981 50.115 PY2REK  
03010205 FJ5DX 59 5796 50.110 LU6HTR  
03030042 FJ5DX 59 5331 50.115 PY5EW  
03030058 FJ5DX 59>GG46IP 4716 50.120 PY5HOT  
03040011 FJ5DX 55>GG46IP 4716 50.110 PY5EW  
03050102 FJ5DX 59 5331 50.110 PY5HOT

# ST KITTS & NEVIS IS.

03010055 V44KAI 559>GG65OT 4981 .053 B PY2REK  
03040006 V44KAI 539>GG46IP 4716 .053 B PY5EW  
03040041 V44KAI 599 5331 50.053 B PY5EW  
03050056 V44KAI 559,5790238 5331 B PY5HOT  
03060148 V44KAI 519>GG65OT 4981 .053 B PY2REK  
03092248 V44KAI 55>GF050P 5782 .052 B LW1DZ  
03130218 V44KAI 559>GG46IP 4716 .053 B PY5EW

03140037 V44KAI 539>GG46IP 4716 .053 B PY5EW  
03140052 V44KAI 599 5331 50.053 B PY5HOT  
03140212 V44KAI 519>GG65OT 4981 .053 B PY2REK  
03170046 V44KAI 599>GG46IP 4716 .053 B PY5EW  
03170047 V44KAI 519>GG65OT 4981 .053 B PY2REK  
03170053 V44KAI 559 4824 50.053 B ZP6CW  
03180143 V44KAI 519 FK87>GG66 4878 B PY2MTV  
03202359 V44KAI 599 5331 B PY5HOT  
03210130 V44KAI 519 5331 50.053 B PY2REK

# United States, W1

03081640 W1JJ -21DB JT65A EME 5718 H OZ1DJJ  
03090515 K1TOL 53A FN44VC>EM89 1175 WZ8D  
03090537 K1TOL LEFTY 3463 50.130 K7CW  
03090542 K1TOL FN44VC>EN51 1556 .131 K9PPY  
03161644 K1RA 662 50.130 N3OX  
03182104 K1MS FN42>EM89 1059 50.064 B WZ8D  
03221732 K1SIX FN43AD>EN58IJ 50.125 H VE3KRP  
03262225 N1BUG 52A FN55MF 50.130 VE2XK  
03270321 K1MS 41A FN07>FN42 838 064 VE2XK  
03272325 WE1H 51 FN07>FN34 570 .126 VE2XK  
03272339 N1BUG 57A FN55MF>FN15 628 W4TAA/  
03291128 WE1H 441 FN34>EN84 792 .260 N8CJJK  
03312203 K1MS 192 50.062 B VE2LCM

# United States, W2

03090403 W2GFF EM60>EM89 1064 50.125 WZ8D  
03090501 W2GFF EL49>EM60 400 50.125 N5OMG  
03211159 K2DRH -20DB EME 10601 .188 J6RFXN  
03231239 K2DRH TR SC BOB 50.257 VE2XK  
03231507 K2DRH FSK441 BOB 277 50.260 J AB3BK  
03272024 W2GFF 449 Sc EL96>EM60 735 KE4WBO  
03272218 K2RDC 55A FN07>FN14 367 VE2XK  
03282127 W2GFF 519>EM79 902 50.125 W8IF  
03291545 K2DRH FSK441 277 50.258 J WN3CDW

# United States, W3

03011150 WN3CDW 441 FN11>EN84 590 N8CJJK  
03022032 N3CJM 559 3475 50.061 B 8P1A  
03041650 K3DOG 449 Es 1168 50.072 B KE4WBO  
03172309 AB3BK FN10>FN03 372 50.125 VE3CRU  
03181538 WA3VXJ I/O EL95 1708 50.068 B N4JF  
03191954 W3PIE 529 FM09>EN81 404 052 B K8WW  
03200020 W3PIE 529 FM09>EM89 343 053 B WZ8D  
03200212 WA3DJG 6DB FN00>EN90XN .053 B WA3TTS  
03230028 K3TKJ 529 FM28FN>EM89 652 WZ8D  
03231849 W3DOG 449 Es 1168 50.072 B KE4WBO  
03232338 N3AUS EN91>FN03 276 50.125 VE3CRU  
03240021 WA3VXJ WEAK >EN90TX 50.068 B NO3I  
03280021 W3DOG 449 Es 1168 50.072 B KE4WBO  
03290324 W3VD 339 Es 1168 50.064 B KE4WBO  
03301317 AB3BK MS>N FL 1322 50.126 K4RX

# United States, W4

03010247 W4/W9DR 55 8919 50.120 LU6HTR  
03011324 K4TOR EM63>EN51 906 50.060 B K9PPY  
03081433 KZ4RR EM90>EM89 1016 50.125 WZ8D  
03082340 KD4LEJ EM98>EM89 205 50.125 WZ8D  
03091138 KZ4RR MS 1785 50.125 K1TTT  
03091423 KZ4RR 52 EM90>EM79 1064 125 W8IF  
03100017 K4TRT EM97>EM89 282 50.125 WZ8D  
03111136 KZ4RR 58>EM79 1064 50.125 W8IF  
03111144 KZ4RR EM90 50.125 WB4CSW  
03122208 KZ4RR 4ZMS>EM79 1064 50.155 W8IF  
03151403 W4/W9DR EL86>EM89 1445 .125 WZ8D

03151405 W4/WB8NFJ EL97>EM89 1346 WZ8D  
03151428 WA4VUT 59 1126 50.125 WZ8D  
03151551 WA4VUT EM50>EN41VR 50.125 H KZDRH/  
03161303 KZ4RR W/W8IF >EL86 50.125 H N3LL  
03201140 KZ4RR 59 EM90 1126 50.125 WZ8D  
03211150 KZ4RR 57 EM90>EM79 1064 125 W8IF  
03221126 KZ4RR 1785 50.125 K1TTT  
03221244 KZ4RR 59 EM90>EM79 1064 165 W8IF  
03221534 W4/W9DR 57 MS >EM79 50.130 W8IF  
03222038 W4/W9DR EL88>EN52RB 1588 W9RM  
03231237 KZ4RR EM90>EM89 1016 50.165 WZ8D  
03231237 W4/W9DR EL86>EM89 1445 .165 WZ8D  
03261136 KZ4RR 55>EM79 1064 50.125 W8IF  
03261610 W4CHA EL96>EL88 297 50.080 B KE4WBO  
03272203 W4/W9DR 429 EL86>EM89 1445 B WZ8D  
03272219 AC4TO EM70>EM89 1016 50.136 WZ8D  
03272311 W4/W9DR 529 EL86>EM89 1445 B WZ8D  
03272351 K4MHZ 419 FM25>FM28 343 062 B K3TKJ  
03281239 AC4TO 559>EM79 1064 50.125 W8IF  
03282112 W4/W9DR 519>EM79 279 50.063 W8IF  
03290101 W4/W9DR GOOD 353 50.063 B WZ8D  
03290319 KD4NMI 339 ES 50.060 B KE4WBO  
03292322 W4/W9DR 529>EM79 279 50.063 B W8IF  
03300125 W4/W9DR EL86>EM89 1445 .063 B WZ8D  
03301215 KZ4RR 55 EM80>EM70 191 .165 W8IF  
03301233 W4/W9DR 529>EM79 279 50.063 B W8IF  
03301311 AC4TO MS FB 1168 50.126 AB3BK  
03301316 K4RX MS 1322 50.126 AB3BK  
03301337 KZ4RR 53 MS EM90>EM79 1064 W8IF  
03311153 KZ4RR 53 MS 1126 50.125 W8IF  
03311155 W4/W9DR 519 50.063 B W8IF  
03311229 W4/W9DR 44 EM84>FN03 1058 VE3CRU  
03311250 W4/W9DR FEW PINGS>FN41 RI N1NK  
03311252 WB4WOR 449 Es 50.062 B KE4WBO  
03311347 K4MHZ 449 FM25 50.062 B KE4WBO  
03311920 K4MHZ 1806 50.063 B VE2LCM

# United States, W5

03011540 K5YG >EM50 50.250 J K2DRH/  
03021136 W5SX EM02>EM25 500 50.140 W K5SW  
03081214 W5GTA 1820 50.125 WZ8D  
03201115 W5GTA 59 GEORGE 1820 50.125 WZ8D  
03221325 N5SIX 441 EM42>EN84 1502 N8CJJK  
03231345 N5SIX FSK441 1926 KM 50.253 J VE2XK

# United States, W6

03130053 K6MYC -23DB EME 7438 50.204 J OY3JE  
03160317 K6QXY -29DB EME 7415 50.204 J OY3JE

# United States, W7

03081632 W7GJ JT65A EME 8059 50.190 H OZ1DJJ  
03112149 W7GJ JT65A EME 8059 50.190 J OZ1DJJ  
03161729 WX7F DN08>DN17 50.125 H K7AWB  
03221742 W7/WORLI DM79>EM79 1712 125 W8IF  
03260215 K7JRW 80344 2156 50.125 K9WZB  
03280137 K7JRW 2156 50.200 K9WZB  
03280152 W7MEM 55A DN17 738 50.125 KE7V  
03290230 K7JRW 2156 50.185 K9WZB  
03311801 K7JRW 2156 50.185 K9WZB

# United States, W8

03011251 WZ8D 59 353 50.125 W9RD  
03080204 K8KS 559 EN82>FN03 343 .125 VE3CRU  
03091908 W8IF 449 Es>FL 1126 50.079 B KE4WBO  
03182246 W8IF EM79>EN44 744 50.125 K9MU



03201309 WZ8D EM89>FN07 945 50.067 B VE2XX  
 03201310 W8IF EM89>FN07 945 50.079 B VE2XX  
 03221836 W8IF EM79>FN07 1011 50.125 VE2XX  
 03222312 WZ8D 559 EM89>FN03 555 .030 VE3CRU  
 03222341 WZ8D CW 507 50.125 K3HX  
 032261650 WZ8D EM89>FN07 945 50.067 B VE2XX  
 03262620 N8JX 55A EN64>FN07 701 .125 VE2XX  
 03262247 N8JX 55A EN64>FN15 793 .126 W4TRA/  
 03272151 N8JX FN46 1173 50.125 W VE2LCM  
 03272217 WD8OST 57A EN76>FN07 468 50.125 H K9PPY  
 03272217 WD8OST GUD COPY 50.125 H K9PPY  
 03272223 WD8OST 55A EN76>EM89 794 50.130 N8UUP  
 03272223 WD8OST 55A W/WZ8D 50.130 N8UUP  
 03272246 W8A 55A EN83>FN07 542 .128 VE2XX  
 03272253 WZ8D PINGS EM89>EM70 1152 K4RX  
 03291655 WZ8D WEAK>FN42 1022 50.067 B KO1U  
 03300122 N8WAC EN84>EN80 444 50.125 N8CJX  
 03311226 W8IF 339 ES>FL 1126 50.079 B KE4WBO

# United States, W9

03090743 AA9VP 52A EN84>EN63 50.125 N8CJX  
 03090747 W9IXV 55A EN84>EM67 847 125 N8CJX  
 03090750 W9IXV 559 AU EM67>EN84 .125 N8CJX  
 03151208 WB9F 441 EN84>EM57 926 .260 N8CJX  
 03161249 KB9PJL 41 EN44>FN10 1228 AB3BK  
 03201431 W9NHE EN53>EL96 2023 50.255 KE4WBO  
 03231308 W9SE 59 MS/ES EN50>EL96 280 J KE4WBO  
 03242147 K9DRG 59 EM79 279 50.125 W8IF  
 03270258 KA9FOX 51A EN43>FN07 1033 VE2XX  
 03272257 W9JN 55A EN54>EM89 744 .100 WZ8X  
 03272332 KC9FQD AU EN54>EN22 532 125 K0CER  
 03272333 NS9I 353 50.125 N8JX  
 03280147 K9MU 55A EN44>FN07 983 .125 VE2XX  
 03291545 W9SE 41 845 50.258 J WN3CDW  
 03291546 WB9F 41 LARRY 845 50.260 J WN3CDW  
 03301620 W9NHE EN53>FN07 896 50.255 VE2XX

# United States, W0

03081214 K0VUY 50.125 WZ8D  
 03082030 NOLL 90&COPYE 1348 50.078 B W8IF  
 03090236 K0KP 52 EN84>EN36 809 .073 B N8CJX  
 03090523 K0KP 59A EN36>FN35 1544 073 B VA2WDQ  
 03090549 K0KP EN36>EN51 641 50.073 B K9PPY  
 03090619 K0KP 55A 2412 50.073 B N1BUG  
 03151412 K0VUY EM48SI>EM89 657 .125 WZ8D  
 03231236 K0GUV EN26>EM89 1245 50.125 WZ8D  
 03260949 K0KP 41A EN36>FN07 1065 073 B VE2XX  
 03262154 K0KP 51A EN36>FN07 1065 073 B VE2XX  
 03270020 K0KP 51A EN36>FN07 1065 073 B VE2XX  
 03270042 K0KP >EN64 991 50.126 N8JX  
 03270133 K0DUB 33A EN27>EN19 50.125 VE4AAZ  
 03270221 K0KP 51A EN36>FN07 1065 073 B VE2XX  
 03270223 K0KP 53 EN36>FN07 1065 .074 B VE2XX  
 03271539 K0KP 41A EN36>FN07 1065 073 B VE2XX  
 03271543 K0KP 539 MS EN36>EN82 .073 B N8UUP  
 03271923 K0KP AU 1348 50.073 B N8JX  
 03272120 K0KP 51A EN36>FN07 1065 073 B VE2XX  
 03272154 NOVZJ EN35 AU 983 50.125 N8JX  
 03272229 K0KP 55A 1348 50.073 B N8UUP  
 03272233 WD0OST 57AU EN76>FN03 577 50.073 B N8UUP  
 03280000 K0KP 51A EN36>FN07 1065 073 B VE2XX  
 03280139 K0KP 55A EN36>EN44 271 .073 B K9MU  
 03280144 K0KP EN36>EN52 546 50.072 B W9RM  
 03300144 K0VUY TRSC EM48>EM25 50.125 K5SW

## Reports of Oceania

### Australia-New South Wales

03082327 ABMN0 58 QF35WE 2378 46.240 T ZL2TPY  
 03300137 VK2RHV 557 QF57SC 2144 .288 B ZL2TPY

### Australia-Queensland-VK4

03012202 VK4TV 59 QG53 1504 46.172 T VK3OT  
 03082328 RTQ0 44 QG53TC 2493 46.170 T ZL2TPY  
 03162246 RTQ0 52>QF22MH 1348 46.172 T VK3OP  
 03220527 VK4BLK 519 QG56IV 271 .110 C VK4BKP  
 03270634 VK4TL 599 6257 50.110 JR6EXN  
 03270643 VK4TL 6257 50.110 JA1JXT  
 03270655 VK4BEG 57 6257 50.130 JR2HCB  
 03270700 VK4RF 559 6257 50.105 JR2HCB  
 03270704 VK4BEJ 59 RUSSULL 6257 .130 W JR1QUR  
 03270711 VK4BL 559 6257 50.106 JR2HCB  
 03270713 VK4BLK 599 6257 50.106 JR2HCB  
 03270714 VK4TL 599>PM53 6238 50.104 JR6EXN  
 03270720 VK4FNQ 59>PM53 6238 50.150 JR6EXN  
 03270730 VK4BEG SSB CQ 6257 50.110 JR6EXN  
 03270736 VK4FNQ JOHN 6257 50.150 JR1QUR  
 03290541 RTQ0 51>QG48NV 6920 46.172 T VK4KAY  
 03290545 VK4FNQ 55>PM95 6282 50.110 S JR1QUR  
 03290600 VK4SIX 57 DALE 6257 50.160 S JR1QUR  
 03290619 VK4FNQ 6257 50.130 JH4ADV  
 03290619 VK4TL 6257 50.115 JH4ADV  
 03290619 VK4TL JOHN QH22 5907 50.115 JA2DLM  
 03290621 VK4BEG 6257 50.130 JE2OTM  
 03290631 VK4FNX 59 ZEL 6257 50.125 JE2OTM  
 03291007 VK4TL S59 6257 50.115 JH7XRZ  
 03300250 RTQ0 58>RF70CV 2493 46.170 T ZL2TPY  
 03300347 VK4 TV S1-5 >PM85KE 46.172 V JA2DDN  
 03310429 VK4BLK CW CQ 6257 50.110 JS1KQQ  
 03310446 VK4QB 6257 50.110 JR2HCB  
 03310452 VK4BLK 559 6257 50.106 JH7XRZ  
 03310455 VK4BLK FB SIG 6257 50.105 JF6CHY  
 03310455 VK4FNQ 59 6257 50.160 JH7XRZ  
 03310455 VK4FNQ W/JA3EGE 6257 50.160 JA3BKP  
 03310510 VK4RTL 599 6257 50.087 B JH7XRZ

### South Australia-VK5

03050035 VK5RBV 559 PF95MK 443 .315 B VK3OT  
 03070359 VK5RBV 539>OF76MI 2205 .315 B VK6JR  
 03270455 VK5DX 57 PF94KR 1869 50.130 S VK4BKP

### West Australia-VK6

03120721 VK6RSX 599 6190 50.304 B JG3LEB  
 03220629 VK6RSX 419>OF87JR 1292 .304 B VK6KXW  
 03222332 VK6RSX 579 OG89II 1292 .304 B VK6KXW  
 03270646 VK6RSX 559 6190 50.304 B JR6EXN  
 03270808 VK6RSX 419 6190 50.304 B JR2HCB  
 03280642 VK6RSX >PM85NC 6035 50.304 B JR2HCB  
 03290714 VK6RSX >PM85 6074 50.304 B JR2HCB  
 03290729 VK6RSX 599>PM53 5733 50.304 B JR6EXN

### Australia-Tasmania-VK7

03050030 VK7RAE 559 QE38DU 526 .057 B VK3OT

### BELAU

03290848 T8EM 59 5330 50.110 JR6EXN

### GUAM

03090408 AH2G 568 QK23 3873 50.004 B VK4BKP

## MARSHALL IS.

03290527 V73SIX 519 RJ39RJ 3931 .013 B VK4BKP

## NEW CALEDONIA

03300347 FK8SIX 559>PM85 6982 50.080 B JR2HCB  
 03300538 FK8SIX 599>PM74 50.080 B JA3EGE

## NEW ZEALAND

03032334 ZLTV2 59 RF64WL 895 45.260 T ZL3MF  
 03090443 ZL3SIX 511>RE54EC 300 .040 B ZL4DK  
 03111900 ZL3SIX 427>RF70CV 523 .040 B ZL2TPY  
 03302232 TV2 57 RF64WL 895 45.260 T ZL3MF

## PHILIPPINES

03290931 DU7/PAOHIP 59 3070 50.110 JA5XAE  
 03310818 DU7/PAOHIP 599 3070 50.110 JG3LEB  
 03310833 DU7/PAOHIP CQ SSB 3070 .115 JA7KE

## Reports of South America

### ARGENTINA

03011644 LU7YS FE49>GF05 1249 50.086 B LW3EX  
 03011900 LU1HKO FF78>GG46 1639 .110 W PY5EW  
 03011917 LW2EX 559>GG46IP 1447 .111 PY5EW  
 03012005 LU7YS 59>GF05OI 50.110 LU3EE  
 03020122 LU3EE CLG UT1FG/MM 50.110 HP3XUG  
 03021953 LU3AHO 51.500 LU8ANS  
 03050123 LW1DZ 59 5112 50.110 S YY4ACU  
 03080233 LU7FFA 58 5112 50.110 YY4ACU  
 03202228 LU1FA CQ 1158 50.110 PY5HOT  
 03211806 LU7TF FF66>FF88 435 50.110 LU6OI  
 03211820 LU8WF FE76>FF66 1125 50.110 LU6OI  
 03211850 LU7YS 549 50.086 B LU8MB  
 03241345 LU8DWR FF81>JN86 12379 .110 HAHV  
 03260205 LU9HPO 57 5882 50.110 W LUGHTR  
 03272034 LU7YS 599 FF49>EK59 5882 B XE3ARV  
 03272102 LW3EX 599 6893 50.111 C XE3ARV  
 03292133 LW2ETU 449>EK59 6789 50.076 XE3ARV  
 03292138 LU7YS 559 6893 XE3ARV  
 03292147 LW3EX 579 GF05>EK59 6789 XE3ARV  
 03292148 LU3DDH 55>EK59 6789 50.110 XE3ARV

### BRAZIL

03011857 PY5EW 59>GF05OI 1150 50.110 LU3EE  
 03030046 PY5HOT MIKE 4951 50.110 FM1HM  
 03030155 PR8ZX 57>GG46IP 616 50.110 PY5HOT  
 03040100 PY5EW 56 ANDRE>FK80CX .110 YV3ESN  
 03091604 PY2 7803 50.110 CU3EQ  
 03140233 PY2WFG 539 GG66>GG46 407 B PY5EW

### CHILE

03011537 CE3AA 59>GF05 1098 50.030 B LU3EE  
 03082108 CE7/K2LQZ 59 1098 50.110 LW6DC  
 03082115 CE7/K2LQZ 59>GF05OI 1117 LU3EE  
 03212004 XQ3SIX 59 1281 50.110 CX2AQ  
 03212005 CE4WJK 1281 50.110 CX2AQ  
 03212217 CE3SBQ 55 2184 50.110 PY5HOT

### Colombia (San Andreas Is.)

03032227 5J0E 5621 50.110 PY2XU

### FALKLAND IS.

03082024 VP8ALJ 59 MARIO 1896 50.110 LW1DZ



03102139 VP8NO -22DB EME 50.190 J W7GJ  
 03112254 VP8NO 13007 50.196 J FE1BTX  
**FRENCH GUIANA**  
 03110302 FY7THF 539>GH13DW 2485 .040 B PY9MP  
 03140052 FY7THF 529 3804 50.039 B PY5HOT

**GALAPAGOS IS.**  
 03030227 HC8N 3548 50.100 N4C8S

**PARAGUAY**  
 03011838 ZF5AA GG14 1018 50.024 LW1DZ

**PERU**  
 03020211 OA4B 51>GF05 3046 50.036 B LU3EE  
 03170058 OA4B 539>GG46IP 2968 50.036 B PY5EW

**TRINIDAD & TOBAGO**  
 03040030 9Y4AT 539>GG46IP 3909 .015 B PY5EW  
 03040119 9Z4AMA 57 ANDY>GG46IP .110 PY5EW  
 03050056 9Y4AT 539, 559>0238 4523 B PY5HOT  
 03050102 9Z4AMA 55>GG46IP 3909 .110 PY5HOT  
 03130215 9Y4AT 529>GG46IP 3909 .015 B PY5EW  
 03140052 9Y4AT 539 4523 50.015 B PY5HOT  
 03170059 9Y4AT 519>GG46IP 3909 .015 B PY5EW

**URUGUAY**  
 03162209 CX2CC 5464 50.110 H FM5AA

**VENEZUELA**  
 03010104 YV5IAL 51>GG65 4565 50.110 PY2REK  
 03010109 YV5ESN 55>GG65 4565 50.110 PY2REK  
 03010301 YV5IAL 57 5112 50.110 LU6HFR  
 03040032 YV5IAL 52>GG46IP 4228 .110 PY5EW  
 03040037 YV4AB 519>GG46IP 4228 .025 B PY5EW  
 03040043 YV5IAL WEAK>GG65 4565 .110 PY2REK  
 03040056 YV5ESN 4839 50.110 W PY5EW  
 03040056 YV5ESN 53>GG65 4565 50.110 PY2REK  
 03040059 YV4AB 519>GG65OT 4565 .025 B PY2REK  
 03040128 YV5IAL CQ 4839 50.110 PY5EW  
 03050056 YV4AB 529 4839 50.025 B PY5HOT  
 03050103 YV5IAL 4839 50.110 PY5HOT  
 03130216 YV4AB 559>GG46IP 4228 .025 B PY5EW  
 03170050 YV4AB 539>GG46IP 4228 .025 B PY5EW  
 03170052 YV4AB 519 4839 50.025 B PY2REK  
 03301909 YV5TA 3426 50.235 N3SRR

## QSL Information

**6W1SJ:** via T93Y  
**8P9TS:** via G0TSM  
**A52VE:** via JF1OCQ  
**A7/G0MKT:** direct or bureau via NM7H  
**C6AYM:** via K9GY  
**KH7Y:** Fred K. Honnold, P.O. Box 1443, Keaau, HI 96749-1443  
**KL7DX:** via AC7DX  
**P40ZB:** via K9WZB  
**V3/K7BV:** via W1JJ  
**VP2M:** direct only via G4DFI

## Lyrid Meteor Shower

The Lyrid meteor stream is associated with periodic comet Thatcher, which follows an orbit tilted nearly 80 degrees with respect to the plane of solar system. Because the comet spends most of its time well away from the planets, its orbit is not greatly influenced by gravitational perturbation from them. As a result, its debris stream has remained stable and the Lyrid shower has been observed for at least 2600 years. Chinese records from 687 B.C. described "stars that fell like rain." This makes it the oldest recorded meteor shower.

Lyrids meteors encounter the atmosphere faster than 49 km/s and their trails are typically nearly as bright as the main stars in the Big Dipper. The shower has a brief maximum when observers can expect to see one or two trails every few minutes. That peak lasts for less than a day (between April 20-22), but there will be more meteors than usual visible for a few days on either side of the peak. The radiant is at RA=18h06m, DEC=-33°. The best times to watch for Lyrids is between 3 AM and dawn, but full moon will occur on April 20, limiting visual observation.

This year's Lyrids could surprise us, or not. In 1982 the hourly rate reached 90 for a single hour. In 1922 a brief outburst of 100 per hour was seen and on April 20 1803, observers counted over 167 meteors in about 15 minutes.

## Weak Signal Propagation Reporter

Joe Taylor, K1JT, has announced a Beta Release of WSPR v0.5. This program implements transmitting and receiving for a digital soundcard mode called "MEPT\_JT", an acronym for "Manned Experimental Propagation Tests, by K1JT". This is the initial release of a GUI-based version of the program. An earlier command-line version of the program is also available from <http://physics.princeton.edu/pulsar/K1JT/>.

Background and technical information appear in WSPR Announcement.TXT, dated March 13, 2008, from which I am copying parts almost verbatim below.

"At present, WSPR is a stand-alone executable, independent of WSJT. It is functional for both transmitting and receiving, but it has no frills. It is executed from a Windows command prompt. Like WSJT, WSPR uses a computer sound card to generate audio tones to modulate a SSB transceiver operating on upper

sideband. In receive mode the sound card digitizes audio from the transceiver. The program scans a 200 Hz passband (the "QRSS window") looking for MEPT\_JT signals, and decodes them. Basic operating instructions for the initial release can be found in the file WSPR\_Instructions.TXT.

Basic specifications of the MEPT\_JT mode are as follows:

1. Transmitted message: callsign + 4-character-locator + dBm. Example: "K1JT FN20 30"
2. Message length after lossless compression: 28 bits for callsign, 15 for locator, 7 for power level ==> 50 bits total.
3. Forward error correction (FEC): long-constraint convolutional code, K=32, r=1/2.
4. Number of channel symbols:  $= (50 + K - 1) * 2 = 162$
5. Keying rate:  $12000 / 8192 = 1.46$  baud
6. Modulation: continuous phase 4-FSK. Tone separation 1.46 Hz.
7. Synchronization: 162-bit pseudo-random sync vector
8. Date structure: each channel symbol conveys one sync bit and one data bit.
9. Duration of transmission:  $162 * 8192 / 12000 = 110.6$  s
10. Transmissions start two seconds into an even UTC minute.
11. Occupied bandwidth: about 6 Hz
12. Minimum S/N for reception: around -27 dB on the WSJT scale (2500 Hz reference bandwidth).

In normal operation WSPR displays information every two minutes and is silent otherwise. In transmit mode it prints a single line when a new transmission starts. In receive mode the program looks for all detectable MEPT\_JT signals in a 200 Hz passband, decodes them, and displays the results. If nothing is decoded, nothing will be printed. In T/R mode the program alternates in a randomized way between transmit and receive sequences.

Like JT65, MEPT\_JT includes very efficient data compression and strong forward error correction. Received messages are nearly always exactly the same as the transmitted message, or else they are left blank."

(The current release of WSJT is vs 5.9.7. WSJT is a computer program for VHF/UHF communications using state-of-the-art digital techniques. It can decode fraction-of-a-second meteor bursts as well as steady signals more than 10 dB weaker than those required for conventional CW.)